

ORE THE DIGGER NEWSPAPER

Volume 89, Issue 12 December 1, 2008

Minds at Mines

What are you thankful for?

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International Day The world is here at CSM

On November 22, 2008, students, faculty, staff, and community members gathered in Friedhoff Hall for a night of food and culture. For more photos, please see oredigger.net.

ANDREW FERGUSON / OREDIGGER



Ultra-cold physics and quantum simulation

Jake Rezac
Content Manager

In 1982, Richard Feynman proposed an application of quantum computers known as a quantum simulator. This idea suggested a way to perfectly recreate physical, quantum processes with the use of computers. As Feynman puts it, "not an approximate view of what physics ought to do...[but] that the computer will do *exactly* the same as nature." Dr. Ana Maria Rey, a faculty member with the Joint Institute for Laboratory Astrophysics (JILA), spoke to a group of Mines students and faculty last Tuesday about her efforts to realize Feynman's proposal. In her lecture, Ultra-cold atoms as Quantum Simulators of Condensed Matter Hamiltonians, Dr. Rey explained how advances in ultra-cold physics have allowed for her research in this area.

Rey began her lecture discussing

ultra-cold physics in general and Bose-Einstein Condensates. "We are familiar with what happens at room temperature, when atoms are moving very fast," Rey said, "But at a velocity of a few centimeters per second... we know that quantum physics plays a role." It is for this reason that ultra-cold physics is helpful in understanding quantum mechanics. A vital tool in understanding ultra-cold physics and quantum mechanics are Bose-Einstein Condensates, which appear when molecules are cooled to near absolute zero. According to Rey, when evidence of Bose-Einstein Condensates was given in 1995, "It was the first time we could look at quantum mechanics at a quantum mechanical level."

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Auxiliary fuel cell research opens new doors

Ian Littman
Assistant Business Manager
for Web Content

"We need to understand how atoms behave and then use that understanding to make a better truck." This statement could be termed Dr. Bob Kee's thesis statement for the November 14 lecture on Solid Oxide fuel cells' applications in the logistical field. Using fluid mechanics, heat transfer, and porous media on the macro-scale and an understanding of charge transfer chemistry and thermodynamics on the micro-scale, fuel cells can be produced to introduce more efficiency into a variety of applications.

Kee began the lecture with a brief description of how fuel cells work: "Using chemical energy, say of hydrogen reacting with oxygen, which has potential to do work, to potentially make electrons flow." As more current is drawn, internal energy losses increase until all the cell's energy is used to overcome internal losses, leaving nothing to create a voltage difference. Until then, however, a small voltage (as much as three quarters of a volt) is created that, when put in series with several more fuel cells, is enough for average power needs.

Solid oxide fuel cells work differently than the more publicized Polymer Electrolyte Membrane (PEM) cells. A ceramic, oxide-based cell allows oxygen ions to pass through, whereas PEM cells pass protons. "The upshot is the same, you electro-oxidize the hydrogen

with air, but you put the products on different channels," explained Kee. Oxide fuel cells also operate at a much higher temperature than PEM cells, usually around 700 degrees Celsius. One advantage of oxide cells is that they can run on hydrocarbons whereas PEM cells must be run on near-pure hydrogen. A disadvantage is that oxide cells are still in development.

Several different cell shapes have been proposed by different companies. Planar disc-like structures, tubular ceramics, and strips similar to photovoltaic cells are all under investigation. Examples of the tubular and planar cells were passed around during the lecture.

One place where fuel cells stand to be a great benefit is in power plant electricity production, where they may attain as much as 60 percent efficiency. "Your best power plants today maybe can get to forty, forty-five percent... so to get twenty points of efficiency is just huge," Kee explained. "This is a goal that hasn't been achieved, but it's out there as something we think that is reasonable." Through oxide fuel cells, the dream of "Clean coal" can be realized (gasify the coal, then use the hydrocarbons as both agents in the fuel cell reaction and as a heat source via heat transfer apparatus), though the current gasification process needs cleaning up. An interesting fact is that the optimal amount for fuel burn in an oxide cell is between 80 and 85 percent, with the remaining fuel sent to a catalytic combustor or the like. Alternatively, biomass

can be used instead of coal for this process, which can theoretically produce 67% efficiency.

The main focus of the lecture, however, is for use of fuel cells as auxiliary power supplies for mobile applications in such instances as recreational vehicles. Here, according to Kee, "Efficiency... is not a huge deal in these applications, but quiet turns out to be a big deal, because... at ten o'clock, you have to shut down your [RV] generator because it's noisy, and it disturbs your neighbors. But maybe you want the air conditioner, or maybe the ball game isn't over... so you want quiet power, but running off diesel fuel."

An even larger application would be the trucking industry, where drivers leave the trucks on while not moving to generate power for the truck's built-in living space. "By EPA's estimates, that consumes... one billion gallons of diesel... that's a big number, with commensurate amounts of pollution," Kee observed. The solution is an auxiliary power source, using an oxide-based fuel cell system. The advantages are that it is quiet, lighter than a bunch of batteries, relatively clean (the only emission is carbon dioxide), is a readily-available fuel, and has a higher temperature tolerance than a PEM system. A large problem with current fuel cell based systems is that they are currently quite complex, resulting in, among other things, a loss of efficiency. One point of research is in making the various components printable, similar in fashion to CMOS chips,

thus increasing predictability and decreasing complexity of the fuel cell system.

Another problem is load tolerance. Unlike PEM cells, oxide-based systems take a fair amount of time to react to changes in load. This can be dealt with in two ways, one being buffering by capacitors and the other being load prediction, with research focusing on the latter method. "If the load goes up... the fuel cell wants to put out more power, and that drops the voltage," explained Kee. "So when the [fuel cell] voltage drops below the bus voltage, the batteries and capacitors kick in, so you can buffer the fuel cell behavior by storing [energy]... [Oxide] fuel cells don't like to follow load... they've got big ceramics [and] they have a large thermal inertia." In this situation, predictive technology lessens the need for capacitors and batteries, thus reducing the complexity of the fuel cell.

A third complexity problem is calculating the reactions in the fuel cell. These calculations have to be replicated on the Auxiliary Power Unit (APU) level to make sure that maximum efficiency and minimum carbon buildup is attained. The solution is linearizing and simplifying the various models to rely on only a few, easily testable, variables. "Many things you want to know about," Kee observed. "For example... the ratio of [carbon monoxide] to hydrogen [can't be directly determined]... you can't put a mass [spectrometer] on the back of this truck... you've got to infer what you

care about from things that you can measure, like temperature."

Measurement is a must when dealing with load changes. There is a spin-up time for the fuel pump in the cell, and if during that time the air-fuel mixture becomes distorted, the fuel cell runs the risk of a meltdown. Fortunately, said Kee, "These simple linear models [of the fuel cell reaction] do a remarkably good job, but you have to identify them." The amazing thing is that researchers have been able to condense multi-state, complex equations into two- or three-state linear equations by identifying various systems.

A final hurdle is the immense production requirements for the ceramics used in oxide fuel cells, "For current technology... for every gigawatt of generating capacity, you need roughly 1,000 tons of ceramics," Kee said. A solution, however, is just a few blocks from the Mines campus. "That's a place that Coors Tech... wants to position themselves, as a supplier," Kee pointed out. Large production demands mean increases in employment, a boon in these troubled economic times.

In conclusion, Kee again stressed the need for researchers to understand the fuel-cell process at all size levels in order to create the best-quality product possible: "An overarching issue about how we do our work... is [to] really bridge scale, understanding things at an atomic level where we can, do experiments to confirm [and] validate at every scale, and then validate [our models]."

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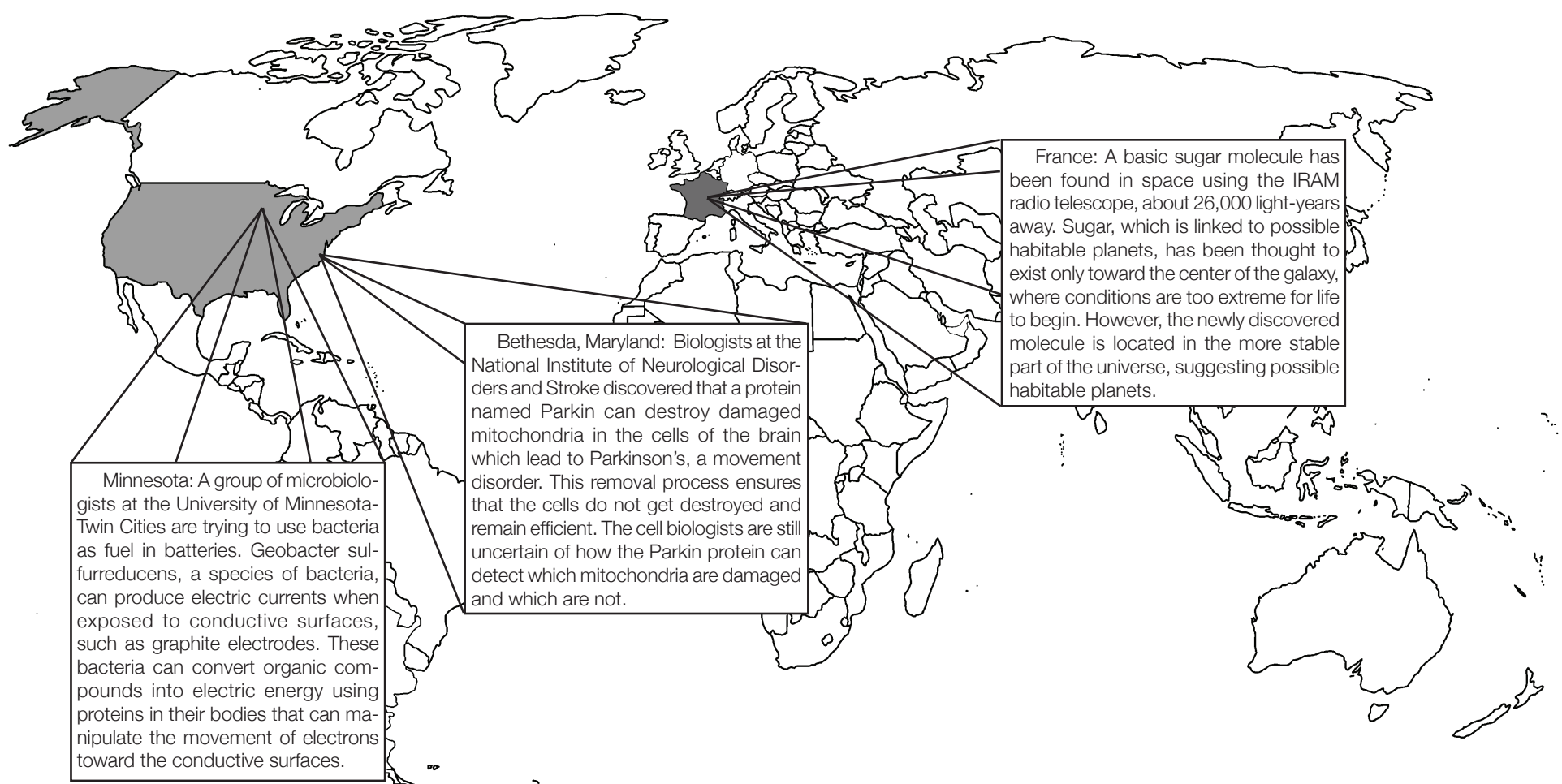
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Scientific discoveries this week

Abdullah Ahmed, Assistant Business Manager



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Headlines from around the world

Emily Trudell, Staff Writer

At least 195 people were killed and 300 wounded by terrorists wielding machine guns in **Mumbai, India**, last week. The assault began late Wednesday night at Leopold's cafe and ended Friday afternoon at the Oberoi-Trident Hotel.

A temporary sales clerk, Jdimytai Damour, was trampled to death at a Walmart in New York on **Black Friday**.

A study recently published by the British medical journal, The Lancet, showed that a newly developed drug named Iressa is as effective as IV-administered chemotherapy in the treatment of **lung cancer**.

The United States received a "D" rating by the **March of Dimes** in their annual premature birthrate report card. One in eight babies born every year in the U.S. is born prematurely.

An outbreak of cholera caused by improper sanitation and contaminated water in **Zimbabwe** has killed a reported 294 people, while over 6000 others have contracted the water-borne disease.

Roughly 19,000 of the victims of the **7.9 earthquake** in China that occurred last May have been identified as students. Approximately 90,000 people are dead or missing.

Kenya's foreign minister Moses Wetangula stated that the **pirates** who have been a plague on the African coast over the last year have been given over \$150 million in ransom money.

A suicide bombing in **Pakistan** that occurred during a funeral procession killed at least five and

injured 30 more. Officials say police gunfire directly followed the explosion.

The price of a barrel of oil has fallen to under \$50, a low that has not been seen in over five years. For the first time in three years, the price of a gallon of **gasoline** has fallen below two dollars, reaching a nationwide average of \$1.989.

For the first time in 400 years, **wild beavers** returned to Great Britain. They were hunted to extinction in the 16th century. The beavers were caught in Nor-

way and will be quarantined for six months before being released in Scotland.

President Bush signed a Senate bill that extends **unemployment** benefits by seven weeks in each state. Currently, each state can offer unemployment benefits for a maximum of 26 weeks.

An unmanned Indian probe crash landed on the moon as part of **India's first lunar mission**.

The Russian parliament approved a constitutional amendment that will extend the **presi-**

dential term in the nation from four to six years.

Research conducted by Texas A&M University discovered a **pygmy tarsier** in Indonesia, a primate weighing roughly two ounces that has not been seen in 85 years.

A new study has linked genital birth defects in boys to excessive **hairspray** use during pregnancy.

Monday, December 1st, 2008, marks the 20th annual **World AIDS Day**. More than 33 million people worldwide are living with HIV or AIDS.



Geek of the Week

...Nathan "Narf" Conwell, Senior: Mechanical Engineering

Spencer Nelson
Staff Writer

[Oredigger] Do you consider yourself a geek?

Yes, I learned to embrace my geekdom at some point. It's important to use it on your side. What can geek do for you?

What's the geekiest thing you own?

I've got a lot of airplane parts that I "liberated" from the place where I used to work. So I've got joysticks, compasses, some avionics, and cockpit paraphernalia. I have a rudder in my garage from the tail of one of our jets... I don't

know why I have that.

What clubs are you involved in?

I'm involved in Campus Crusade, if anything. I always go and help out. I've been going there since I was a freshman.

What's your favorite movie?

That would have to be *Mr. Lucky* starring Cary Grant. It was produced in 1943, his 43rd movie.

So are you a movie guy?

I guess so. More a movie guy than a TV guy, I guess.

What's your favorite class?

Machine Design! It's awesome because it's the closest thing to engineering that you get at this school. Even more so than Se-

nior Design. In Machine Design, they give you this problem and say, "Here, make this better."

Do you have any nicknames?

I go by "Narfus" or "The Narf." It's a long story. Basically, there's a lot of Nathans in the group I hang out with. We all need nicknames at some point.

Do you have any geeky talents?

Like what? All of my talents are awesome, like in ninja style. If ninja is geeky, then yes. I discovered that I can pour two cups of water at once from two pitchers the other day.

Do you play any instruments?

I play the piano and the ukulele. The ukulele is cool because it's only got four strings instead of six like the guitar.

Do you have any phobias?

I don't like people standing right next to me when I'm playing foosball. I guess I have a fear of people standing next to me or something.

Do you play foosball much?

I do. Is Ryan Decker going to read this? Lately, I have been victorious over the great Ryan Decker, my master. He owes me Chipotle too.

Do you have any hobbies?

Engineering. It's a hobby of mine. I like to play the piano. I like to mess around with remote controlled things, like planes. I airsoft too.

Do you have any advice for freshman?

I got a lot of advice. I just have to try and find some good advice. Don't be afraid to meet people. Do your school. That's the reason why you're at Mines. Don't take it too seriously, too.



SPENCER NELSON / OREDIGGER

Facility Spotlight: The Natatorium

Benjamin Johnson
Staff Writer

Two years ago, the Mines swim team practiced in what was called the "dungeon" in Volk Gymnasium. Last year, the new Student Recreation Center brought with it a brand new natatorium that features a pool, hot tub, diving board, basketball goal, and water polo nets. The lighting inside is terrific at all times of the year, day or night, and is kept at a warm temperature year-round. One of the most high tech timing systems in the central United States also resides in the natatorium.

The natatorium is the main practice facility for the varsity swim and dive team, in addition to the IM kayaking club and the IM sweet meet. In the past, an IM water polo team also used the natatorium. Natatorium director Kevin Sage, when asked about the water polo team, said he "would promote one if students wanted to start it up again." The hot tub, one of the largest in the nation, is also a main feature in the natatorium. In the shape of the

Mines crest, it is open to all students, staff, and faculty and, according to Sage, it is a great place to "rejuvenate after a workout, is a great social gathering place, and is great for hanging out."

One of the main events hosted this year by the natatorium, besides varsity meets, was the IM swim meet. The event had many participants, and allowed students to "explore their competitive nature and get out and try swimming," said Sage. Next semester, Mines is hosting the BlasterBlast Triathlon on April 19 and is open to everyone at Mines. The swimming portion of the competition will be held at the natatorium. Also, try-

outs for the swimming and diving teams will be held at the beginning of next semester and anyone interested is encouraged to try out.

In the next few years, Sage would like to see the high quality of operation already found in the natatorium maintained. According to Sage, two lifeguards are always on duty to keep a "safe, clean, and maintained environment," and to stop horseplay. Recently, the open swim times were increased by half an hour which means the natatorium has one of longest swim schedules in the Denver area. Even with this increase in swim time, Sage said, "Involvement is maxed."



BENJAMIN JOHNSON / OREDIGGER

iTunes University

Ian Littman
Assistant Business Manager
for Web Content

Everyone has heard of iTunes. The world's largest music store also has an educational component, iTunes U, where universities can share educational podcasts (syndicated audio or video segments) with the world. Dr. Christian Shorey is currently applying for use of iTunes U to host a new video podcast in the Geology department. Dr. Shorey discussed some of the interesting facts about the system, as well as the rationale for using it.

A big reason for using iTunes U is that Apple provides high-speed servers and bandwidth on which the podcast files are stored. This alleviates the issue of having to store files on one's own server and having to deal with the large bandwidth costs associated with pumping rich media out over the internet. In Shorey's case, this extra bandwidth is a godsend, "[Video podcasting] is going to have huge files and it's better to have somebody else supply [bandwidth] for us... One issue that I have come against is that I have a limited quota for my SYGN101 site, and right now, I'm requesting another two gigabytes of space there from our campus to get the final [audio podcast] episodes up there... space is one of the biggest constraints for me to [start] video podcasting. That's where iTunes U has the great advantages."

It is not hard to start an audio podcast. The tools required can be had on the cheap and bandwidth demands are lesser for audio than for video. "All I did for my personal podcast was to buy a microphone and [use] the free program Audacity to record the material and edit it, and it's free to apply for a podcast with iTunes." Video podcasting requires more equipment, but costs have fallen as of late. Powered by Mines' tech fee, Shorey has procured a Canon HV20 high definition video camera with associated accessories for the production side of the podcast. However, bandwidth demands loom large with the prospect of HD "Vidcasts," and the solution to that demand is an involved, but straightforward, signup process for Apple's academic podcast system.

"As far as what is needed for getting on [iTunes U], obviously you have to be an accredited university. You have to agree to some very basic terms... it's just very minute little legalistic issues that you have to jump through the hoops on and then you have to have the technical support in place." In Mines' case, Connie Schamaun is the technical representative while Jonathan Caine is the designated contract signer for the iTunes U application process.

One small hang-up was the issue of campus outreach. With a brand-new website, Academic Computing and Networking (AC&N) was unsure whether a contract with Apple would compromise Mines' own outreach

attempts to some degree. Their fears were allayed, however, when Shorey described the outreach and technical aspects of the new program. As Shorey puts, "If you only had the [podcasts] on [Mines'] website... the global public at large would only [find them who] were already aware of our university. Whereas with iTunes U, you would be searching for a category which may be Geology, and up would pop my podcast... at which point you would become aware of our university and the type of material we offer here." From the technical perspective, the mention of high-bandwidth, high definition video quickly convinced AC&N that they didn't necessarily need to run this project on their network.

The outreach potential of podcasts have already been demonstrated with Shorey's current audio-only segments (available at <http://tr.im/sygnicast>), which have reached such diverse locations as Australia, South Africa, Tanzania, Scotland, and Norway. The video shows will further strengthen Mines' web presence for those casually browsing for academic content. "With video, we'll be able to show the environment that our school is located in, which is an obvious plus for us." The formats

"It's obvious that video is something that gets more attention than the audio. If you search for geology in iTunes right now, you'll probably find my podcast ranked about ninth..."

for video and audio podcasts will be different, with different focuses. Whereas Shorey's current project mirrors and expands upon his lecture series (serving as an excellent test study guide in the process), videos will be shorter due to bandwidth constraints and more focused on field techniques. "It's going to show how you go out and do field work in geology or in environmental water and air sampling, about meteorology reporting, things like that," says Shorey of these videos, which will go live sometime next calendar year.

Going forward, "It's obvious that video is something that gets more attention than the audio. If you search for geology in iTunes right now, you'll probably find my podcast ranked about ninth, whereas the top one is a university from Canada which has put out about eight low-quality films, which are really not content-rich at all," remarks Shorey, who believes he can do much better. Once the SYGN101 videos go online, he will hold a faculty seminar on the submission process of material to iTunes U, and both Geological Engineering and its associated research branch, CORE, are lined up to follow up if the project succeeds. "I think once I have it up and running with some of the initial content posted, it will become easier to attract other faculty to the idea," he says of the endeavor which, if it spreads, could bring Mines into the online limelight and provide both perspective and attendant students with large amounts of learning material to broaden and increase their academic experiences.

The Humanitarian Engineering Minor

Alec Westerman
Staff Writer

“The idea of the [Humanitarian Engineering] program is to prepare engineering students with a better perception of social environments,” Dr. David Muñoz explained. The Humanitarian Engineering program, which was implemented at Mines in 2003, currently includes fifty undergraduates from a wide range of majors. Thus far, only one class of Mines students has graduated with the degree. Most of these students in the program have planned on holding a traditional job and doing humanitarian engineering work on their vacations.

Dr. Muñoz thinks there are more opportunities for Mines students graduating with the minor. However, he also indicated that they might not yet be realized.

The program is new at Mines, the first school to offer such a program. Currently, the program requires 18 credit hours of humanity and social science. He indicated that the program is still in developmental stages. Broad participation in Engineers Without Borders nationwide lends itself to optimism as far as this program is concerned. It is indicative of interest in the subject matter.

One student, when asked why he was in the humanitarian engineering program replied, “That’s why I came to this school.” Sophomore Justin Tappan responded to the same question saying, “I really want to do missions work with my degree here,” while Callen Lile added “I would hope to continue working on humanitarian projects for the rest of my life.” Tappan summarized the degree by saying, “It’s for people who really want to make a difference in other people’s lives.”

Dr. Muñoz explained that the humanitarian engineering program isn’t about temporary fixes but rather “Sustainable community development.” He added that an integral part of the program is including indigenous knowledge in the creation of the final product. The benefits of this are that the native populations often have very useful knowledge of their region, and that the indigenous people will be the ones who will need to know how to repair any improvements whenever they break down.

In general, Dr. Muñoz indicated a dislike for specialization and a preference for broader understanding by all. He indicated that specialization has taken us away from humanity. However, he noted one major exception where specialization worked - the cell phone, where the workings of which the user need e no idea in order to use it. He particularly perceives the cell phone as a unique boon to the developing world because it is “so much cheaper in the infrastructure.” However, he noted the rarity of such occurrences and noted that an indispensable part of sustainability is “pulling back” to see the bigger picture.

The program is new at Mines, the first school to offer such a program.

Many challenges lie ahead for the Mines program. Among these are the incorporation of the minor’s class schedule with the campus’s various major programs and finding empty classrooms during available times. Currently, the program requires 18 credit hours of humanity and social science. He indicated that the program is still in developmental stages. Broad participation in Engineers Without Borders nationwide lends itself to optimism as far as this program is concerned. It is indicative of interest in the subject matter.

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Campus Benefactors: George R. Brown

Benjamin M. Weilert
Staff Writer

George was the recipient of many awards, including a Distinguished Achievement Medal in 1949, and an Honorary Doctorate of Engineering in 1962. He was also awarded the John Fritz Medal, engineering’s highest honor, which was also awarded to the men such as Thomas Edison and Alexander Graham Bell. Still, Brown felt engineering was more than just making money. “What was important was the romance of engineering. Engineers were men who went to far places,” he once said.

With the large amount of money made in the construction business, Brown used his wealth to indulge in philanthropy. Due in part to his generous nature, many things have been named after him. A few items that bear his name are the George R. Brown Medal, which is awarded to someone in relation to CSM who has proven themselves beneficial to the field of engineering education, the George R. Brown Convention Center in Houston, Texas and the familiar George R. Brown Hall, which houses the mining engineering and engineering departments at CSM.

As it says on the plaque in the Brown Building, George R. Brown was, “An alumnus of worldwide fame and acclaim for outstanding achievement in engineering and construction, in business, and in the advancement of engineering education.” Brown died in 1983, three years after the George R. Brown Hall was completed.



BREE WALTMAN / OREDIGGER

A look into CSM’s DPS

Zachary Boerner
Copy Editor

The Department of Public Safety (DPS) has long been an institution on campus regarded with both respect and loathing. Many respect the department’s attempts to make CSM a safe and friendly campus, while some hate how the department seems to pick at every little violation.

However, out of all the departments on campus, the DPS is the one most likely to have a clouded agenda. Not that they attempt to hide what their mission is, just that it doesn’t seem widely broadcasted, either by nature of the fact that most people don’t care to find out, or by the DPS not fully broadcasting this message.

Chief of Police Keith A. Turney talked earlier this year about the goals that he and the department had. It’s about “being an active involvement, [about] walking around, learning the students.” He felt that at the beginning of his tenure that “the officers weren’t part of the community,” but that he’s working on making the department less of an “outside force that just comes in when things happen.”

One of the ways he’s hoping to accomplish this is through “Community policing,” where the community is actively involved in the job of keeping the campus safe. By integrating the officers in the department into the community, people are more likely to talk to the officers in an event, enabling them to better serve the community.

As for the officers themselves, Turney said that “eight are full-time sworn officers... [and] three are

part-time sworn officers.” Sworn officers are fully trained, certified police officers for the state of Colorado. In addition to these are other non-sworn officers and the student officers, who are trained by a sworn officer.

At the moment, the campus only has one officer on duty at all times, but Turney hopes to move beyond that. In addition to the police force on campus, the DPS works very closely with both the Golden police and the Jefferson County police departments. The CSMDPS “backs up Golden and Golden backs up CSM,” since the two departments are so close to each other. In the case of Obama’s visit to campus, “Everyone was on. We had Jeff Co, we had Golden... the Secret Service was also here. All but two of our sworn staff worked that event.” As for more staff, Turney said that “three more full-time staff are needed so that we can have two officers on duty at all times.”

As most people know, however, the crime rate at CSM is very low. However, Turney pointed out that “crime rate is not equal to workload. The department offers [many] more services than a normal police department, including parking complaints, locked rooms and cars, and jumpstarts.” Partly because of this, Turney said that this is where the community oriented policing comes in, helping to keep the crime rate low and the community involved.

As for the DPS itself, it gets \$85,000 in funding for the department itself. This includes things like cars, desks, and overhead. Colorado provides funding for the salaries of the department,

which, contrary to rumors, are not extravagant, but fall about on the average for police officers. As for parking tickets and such, all of the money that comes from that is earmarked for parking improvements, not to line the department’s pockets.

The department is still under its first year with Turney and is moving into its second year. Turney, like any good manager, has attempted to get the feel of the land before implementing any drastic change in policies. The department operates in the community rather well, and the officers are friendly when you speak to them. They can be seen wandering or patrolling the campus and never seem to be too far out of sight, allowing the students to feel protected.

However, as many students know, quite a lot of officers’ time is devoted to handing out parking tickets, and while signs informing people of which lots they can park in have become clearer, there are still a few grey areas on campus. Some may not consider this a bad thing, and to a large extent, it is not. However, some view this as the department being overbearing.

The CSMDPS is certainly doing their job, if not well, then decently. The campus is safe and no one need fear walking out in the dark alone. But, improvements can always be made, and Turney hopes to improve the department’s image on campus. Future improvements even include a parking garage on campus, possibly located where the Hall of Justice currently stands, that would help alleviate the campus’s parking problems.

Must See Movies: Director-Actor pairs

Benjamin M. Weilert
Staff Writer

As we head into Christmas break, many students will be glad for the break, but will be at a loss for how to deal with all this free time that has suddenly appeared. So, for the final Must See Movies of this semester, we'll look at several movies to fill that down time. Many directors work well with certain actors, and will tend to cast them in several movies because of that amiable dynamic. If something works, why change it? These three directors have cast actors in many of their movies because they fit so well into the directors' style.

1. Alfred Hitchcock / James Stewart

Alfred Hitchcock, the master of suspense, could always find James Stewart to act in a cool and clever style that would accentuate the impending peril awaiting the characters in these three films:

Vertigo (1958)

Now at #9 on the American Film Institute's top 100, *Vertigo* is perhaps Alfred Hitchcock's best film. Stewart plays a cop who had to leave the force after he developed acrophobia when his partner fell to his death in pursuit of a criminal. He then falls in love with a woman that he's investigating for a friend of his (the woman is the friend's wife). The wife dies when she throws herself off a bell tower. But that's only half of the story. This film is perhaps best known for the camera technique known as "The Vertigo

Effect," where the camera zooms in and tracks out at the same time.

Rear Window (1954)

#48 on AFI's top 100, *Rear Window* was shot using only one set. Stewart plays a photographer who is now confined to a wheelchair after an accident. In order to pass the time, Stewart's character takes to looking out his apartment window at all the other people who live near him. In doing so, he comes across what he believes is a murder when the wife of a man who lives across the courtyard goes missing. With the help of his girlfriend (played by Grace Kelly), he eventually uncovers the whole truth of the situation.

The Man Who Knew Too Much (1956)

James Stewart and Doris Day portray a family who are on vacation to Morocco with their son, only to be dragged into an assassination plot. After their son is kidnapped by the assassins, Stewart and Day make it their business to go to London and stop the assassination. *The Man Who Knew Too Much* won an Oscar for the song "Whatever Will Be, Will Be (Que Sera, Sera)," sung by

the incomparable Doris Day.

2. Martin Scorsese / Robert DeNiro

Martin Scorsese has a knack for directing gritty mob-related films just as Robert DeNiro has a knack for playing gritty, mob-related characters.

Raging Bull (1980)

Raging Bull won Robert DeNiro an Oscar in 1980 and is placed at #4 on AFI's top 100 list. In case you missed my earlier review of this film, here's a quick recap. DeNiro portrays Jake LaMotta, a boxer who rises through the ranks of middleweight boxing. Of course, he also fights with his wife and brother, eventually ending up as a lounge act quoting Marlon Brando.

Taxi Driver (1976)

DeNiro portrays a Vietnam War veteran who takes up a job as a taxi driver because he has a bad case of insomnia. Unfortunately, when he works at night, he comes across some truly despicable characters. At this point, DeNiro decides to take matters into his own hands and becomes a vigilante hero ("You

looking at me?" comes from this film). *Taxi Driver* is placed at #52 on AFI's top 100 list.

Goodfellas (1990)

#92 on AFI's top 100, *Goodfellas* is one of the quintessential gangster films. *Goodfellas* follows Henry Hill (played by Ray Liotta) as he becomes more and more involved in his dream job, a gangster. DeNiro portrays James "Jimmy" Conway (who is based on real-life gangster Jimmy Burke), who becomes the close friend and crime partner to Liotta's Hill. The cast starts to get into trouble when the mob starts dealing with drugs, making everyone a little paranoid. Conway testifies against the mob and winds up in the Witness Protection Program as Hill just wants to live a normal life.

3. Tim Burton / Johnny Depp

Tim Burton's skill for depicting the macabre perfectly matches Johnny Depp's skill for playing characters embracing it. Fittingly, Helena Bonham Carter also appears in many of the Burton/Depp films, also including *Corpse Bride* (2005).

Edward Scissorhands (1990)

In *Edward Scissorhands*, Depp portrays Edward, a creation of a mad scientist who lived in the castle on the hill. Unfortunately, the scientist died before he could finish Edward's hands, so he's stuck with scissors instead. Edward lived in solitude until Avon came calling, and brought Edward into the community, where things turn from bad to worse, after finding he had a

talent for cutting hair and trimming hedges.

Sweeney Todd: The Demon Barber of Fleet Street (2007)

Sweeney Todd shows us the extent of Depp's talents. In this musical, Depp plays Sweeney Todd, who was originally exiled under the name Benjamin Barker so that the judge of the city could have Barker's wife. Todd quickly becomes a famous barber due to his previous experience and in the process helps out struggling baker Mrs. Lovett (Helena Bonham Carter). Todd achieves vengeance only after getting carried away with slitting people's throats. Very dark and monochromatic, the surplus of blood is about the only color appearing in this film.

Charlie and the Chocolate Factory (2005)

Based on the children's story of the same name, *Charlie and the Chocolate Factory* puts Depp in the position of trying to fill the shoes left by Gene Wilder, in the 1971 movie, *Willy Wonka & the Chocolate Factory*. Depp portrays eccentric candy genius, Willy Wonka, who has decided to allow a tour of his chocolate factory to five lucky children and their parents. Of course, in order to teach a lesson, each of the children's vices are exposed and turned against them in unique ironic twists until only the pure-of-heart Charlie is left.

For Homework – See *The Yule Log HD* (2003)

Beer Review Isolation Ale, Odell Brewing Co.

Akira Rattenbury
Staff Writer

"Deck the halls with beer with malt, ye ..." Yes. Beer with malt, ye. "Fa la la la la" and all that good stuff.

The semester is almost over! As you celebrate the conclusion of finals with Coors products and cheap vodka, remember this holiday season that you're only a dependent for so long. Exercise your rights and demand better beer. Rejoice! Ask your parents this winter to stock up on good drinks and beverages for your friends and family because you only have so long before you have to pay for tasty things yourself.

When looking for beers, opt for a variety. Your parents will ask you, the mature, 21+ year-old imbiber, for hints. Suggest a beer with some sustaining flavors, palatability, and extravagance in this dismal winter season of economic recession. As usual, I strongly suggest a micro-brew variety, as you may have guessed throughout this semester's beer reviews. The cornerstone of any nutritious beer palate, the winter ale will surprise the hop-lover with maltiness and a stronger alcohol flavor than your run-of-the-mill red ale.

While not the most pungent, spiciest, or alcohol-ridden of the winter warmers offered this year, Odell's Isolation Ale still makes its wintertime mark. The strong

scent of caramel malts, balanced by a mediocre spice cabinet with floral overtones, establishes a suitably crisp flavoring. Taste will adequately compliment the lack of scent in this beer, and keep you sipping this well carbonated brew.

A thick head and malt-rich constitution greet the newcomer to this festus. For the rest of us, the alcohol-laden bitters and earthy citrus flavor reminisce of a summer's IPA long past with a healthy, inebriating dollop of 6.0% ABV. The hop flavor, if you can parse it out, is subtle. In an optimistic reflection, the taste can be construed as the beer's blend of balancing hops to morph the genre's malty pedigree. From the company's own description, there is a healthy dose of Cascade and Magnum hops to pop flavor where fruits and spices are missing.

To be sure, all this hop-talk is just humoring the essential malt-dominated red ale taste. Honestly, this rather light-flavored winter ale passes muster as a crowd pleaser. Your

Bud Light-drinking uncle may get a kick out of the full-bodied taste, but won't shy away from another bottle due to any overbearing spices.

In this time of union, remembrances, and friendship, remember to share a good beer with those you love. Nothing says family like a strong ale on a cold night in December.



AKIRA RATTENBURY / OREDIGGER

Faculty Spotlight: Dr. Robert Kee

Patrick Beseda
Staff Writer

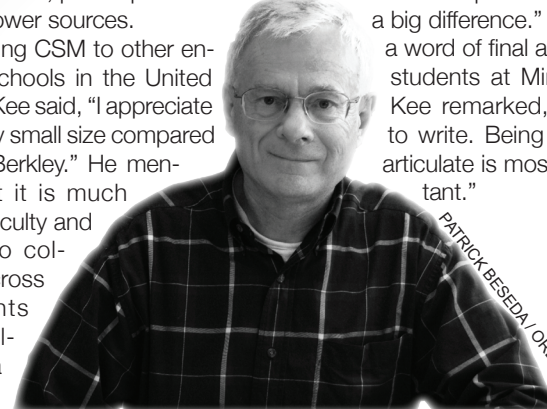
"It's a competitive world out there, we need to work hard," Dr. Robert Kee said of the Colorado School of Mines (CSM). "Things cycle, and if we want to stay on top, we are going to have to work to stay on top." Dr. Kee is the George R. Brown Distinguished Professor at CSM, and has been teaching at CSM since 1996. Dr. Kee has a Master's degree in Mechanical Engineering from Stanford University and a Ph.D. in Mechanical Engineering from the University of California at Davis. Kee worked at the Sandia National Laboratory for 25 years, which gave him the experience needed to be competitive in the fields of science and engineering. He now teaches undergraduate courses at CSM such as Heat Transfer. Currently, he is involved in cutting edge applications of chemically reacting flow. This area of study finds applications in fuel cells, power plants and vehicular power sources.

Comparing CSM to other engineering schools in the United States, Dr. Kee said, "I appreciate the relatively small size compared to MIT or Berkley." He mentioned that it is much easier for faculty and students to collaborate across departments at CSM, allowing for a closer knit

community. Of the students at Mines he said, "They tend to be very personable and approachable."

Dr. Kee authored a textbook called Chemically Reacting Flow, which he uses to teach EGES552, Reacting Flow. Other than his own book, he said he would recommend books such as "The World is Flat" and other books similar to those of Thomas Friedman. "Scientists and engineers should understand where their work fits in the world as well as understand where the world is headed."

Dr. Kee is also deeply involved in the school's research in renewable and sustainable energy. "There are some big proposals coming out of here and a lot of active programs." Working in areas such as fuel cell research and applications, electrolysis and experimenting with new materials, CSM researchers are at the forefront of many of these technologies. "It's what faces the nation and what faces the world. Collectively, we have the power to make a big difference." Offering a word of final advice to students at Mines, Dr. Kee remarked, "Learn to write. Being able to articulate is most important."



PATRICK BESEDA / OREDIGGER

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Plus/Minus Grading System, Bus Pass receive attention at ASCSM meeting

by Hilary Brown

"If [it] comes as a shock to you that they want to put forth a plus/minus grading system, it certainly comes as a shock to all of us," said Kevin Duffy, president of the Associated Students of the Colorado School of Mines (ASCSM). "We find it to be almost a violation of trust and disrespect that a certain issue that would come so close to students has not been brought to ASCSM, [and] has not been brought to the attention of any students whatsoever."

Read Full Story - 0 Comments

Demands in India and China impact Colorado

by Sophie Hancock

The bullish progress of China's economy and India's economy has been monitored for some years, and their combined resource demand and what it means for Colorado was revisited during this weeks' Van Tuyl lecture given by Dr. Vince Matthews.

Read Full Story - 0 Comments

Quantum of Solace

by Benjamin M. Weiert

Ever since the turn of the millennium, many film franchises have taken to starting over, reinventing themselves for this modern era. From superheroes like Batman and Superman to age old classics such as Rocky and Rambo, these franchises have been going back to the drawing board to pull in ticket sales. The James Bond series is no different. In 2006, Daniel Craig was added to the ranks of actors who have portrayed James Bond, including Sean Connery, Roger Moore and Pierce Brosnan.

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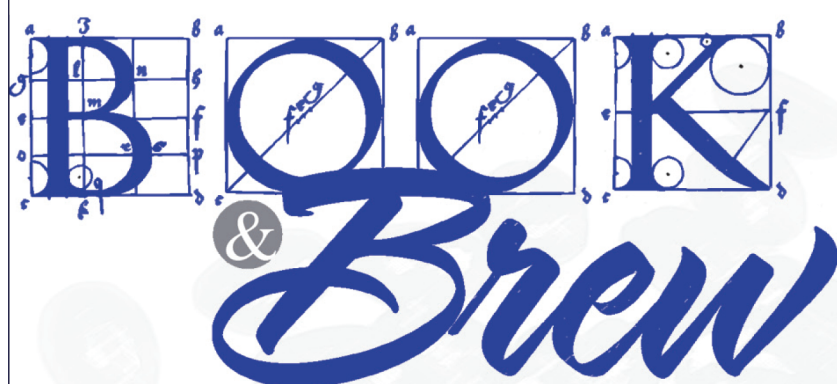
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WOMEN'S VOLLEYBALL



RACQUETBALL (M)
DAN LEWIS



MEN'S BOWLING
TWIN SISTER OF DOMINATION



DISK GOLF
MANFUZ MOHAMAD



GRASS VOLLEYBALL (W)
SONYETTE AFOGGIN



WOMEN'S DODGEBALL



WIFFLEBALL (M)
TEAM AWESOME



MEN'S DODGEBALL
SHOOTER MCGAVINS



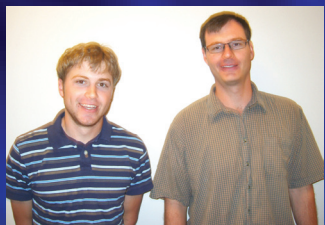
RACQUETBALL (W)
ALEX SWANSON



WOMEN'S BOWLING



CLOSEST TO THE PIN
RICK DAHL



GOLF SCRAMBLE
SMOCYK & HUTKO



FLAG FOOTBALL
RED ROCKETS



FIELD GOAL COMP
CHRIS MCFEE



TENNIS SINGLES
CHELSEA NEWGORD



GRASS VOLLEYBALL (M)
THUG LIFE



BOWLING
JULIA ALBERTSON



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CROSS COUNTRY
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200 FREE
NICHOLE KOSTECKY



WOMEN'S 100 FREE RELAY



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BO BEINS

CSM FALL 2008 INTRAMURAL CHAMPIONS

Are undergrads prepared for grad school?

Benjamin M. Weilert
Staff Writer

When I graduated from Mines last spring, I felt that I was prepared for the next step. I felt that I was prepared for grad school. With my Bachelor's Degree in hand, I felt that I was ready to advance my studies at Mines. However, upon arrival at grad school, I had quite the wake up call.

In my naiveté, I thought my undergraduate education at Mines would adequately prepare me for graduate level education at the same school. I figured since it was essentially the same school, the courses that I had taken over the last four years would be sufficient for survival at the next level. Granted, many grad students come from very different backgrounds than Mines, but the institution should understand the students who decided to stay. After all, they know exactly which classes you've taken, and who taught them.

Yet, what I have come across is a heightened expectation that doesn't match with what I learned in the past. Even when attempting to get a Master's degree in the same subject I received my Bachelor's degree in, I have come across many gaps in my education. Most of these stem from how material is taught at the undergraduate level. For years, I did my homework by hand, showing each of my steps because this is what the professor

required. Now that the concepts have advanced, hand calculations are too difficult, so one must turn to computerized calculations.

Here's where a gap comes in. As a result of always doing calculations by hand, I was never taught computational mathematical packages such as Mathematica or Matlab. Sure, it would have been helpful for the homework to call for a check in these programs to get the student familiar with the software, but it didn't. Plus, there was no course that explicitly taught these programs. To top everything off, if one were to pick a program to go off and learn on their own, how would they know they picked the right program to learn?

Even courses that require use of a package such as Matlab thrust the students into it with a sense that they already had experience in it. Many professors claim that these are "necessary skills" that all students should have. What I ask is, where are we supposed to be picking up these "necessary skills?" If they are so necessary, then where is the course teaching these skills? How are we supposed to know that we need these skills? I'm not merely referring to computing skills, but also research skills.

Part of the appeal of the grad school program at Mines is the ability to get a Master's degree in five years. Granted, this takes a

lot of effort, not only in graduating from undergraduate school in four years, but being able to keep up with 15 credit hours of grad work for two semesters. I was drawn even more towards this program because of the non-thesis program. I felt that I didn't have enough previous research experience to be able to write a thesis at the end of my fifth year. However, the three core classes that are required for a Master's degree in my major are heavily aimed towards students doing research.

Since I feel unprepared to do research, these core classes are frustrating because I feel that they are not aimed at what I really want to do. Perhaps it's just an artifact of a switch over to a non-thesis program, but I feel that maybe there needs to be a different set of core classes for those of us not interested in research.

In the final analysis, Mines should know what is expected in its graduate school program, and should perhaps teach its undergraduate students some of the skills that would be needed to transition cleanly to the next level. And perhaps professors wouldn't complain so much about students not having the "necessary skills" if they'd just go down to the freshman level and introduce them so that they can be sure the concepts are being taught. Or perhaps I'm just a lone wolf who never received the guidance he needed.

Principally Irked

Republicans lost on the path to victory

Andrew Aschenbrenner
Opinion Columnist

I am not a partisan. I do not consider myself bound by ideology, and I think that I am a better person because of it. I also use my privilege to vote in each and every election. For these reasons, I am exactly the type of voter that political parties should be fighting over. Unaffiliated voters like me make and break elections, but Republican leadership doesn't seem to realize it.

When Republicans champion issues, they win big. Examples of

the past 40 years include Ronald Reagan, Richard Nixon, and 1994's "Contract with America." But the Republican party is no longer focused on issues. Bill Ayers, Jeremiah Wright, and gay marriage may be contentious, but they don't determine whether food is on the table. The economy does.

I'll be honest: it pains me to see true conservatism abandoned. Ronald Reagan, while he certainly had some errors in judgment, trumpeted the cause best, and he is most definitely rolling in his grave. His party has sold its soul in return

for promises of votes, and has mortgaged its future in the process.

It would please me to have a party that only articulated positions and policies that I approve of, but, I'm a realist. Of the two major parties, I would prefer to vote Republican, because I consider most of my values to be more conservative than the ones Democrats usually advocate. But it may be a long, long time before the Republicans nominate a national candidate that I can vote for in good conscience.

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Letters to the Editor

Dear Editor,

I was pleased to see a rather refreshing view on the subject of same-sex marriage by Mr. Aschenbrenner.

We live in a country that was founded for many reasons, one of which was to be free from religious persecution, and yet religion based morality finds its way into our law and judicial systems far more than it should. I'm not sure why so many people feel compelled to impose their religion and morals on others.

We all have the right to pursue happiness, and I'm of the opinion that so long as your pursuit doesn't directly interfere with others, it should generally be fair game. Honestly, barring extenuating circumstances, people's romantic relationships with others whether hetero or homo, is none of anyone else's business. It's odd how so many people that take their rights for granted stomp on other's so easily.

There is no issue for merely believing that same-sex marriage is wrong, but there is an issue when it becomes more than a belief/opinion.

I enjoyed the article, thanks Mr. Aschenbrenner.

Jeff Park

Dear Editor,

As the Head Coach of the Mines Swimming and Diving teams, I thought I would give you a heads up that our team has had an extremely successful first half of the season, and we will be taking our show on the road immediately following Finals Week to a championship meet in Long Beach, CA on December 11, 2008.

The men's team started the season off by winning CSU's Early Bird Invite (which is the first time Mines has ever done that), and last weekend dominated the 2nd Rocky Mtn Invite, hosted by Mines. The ladies team has a full roster for the first time in their history, and are having a great year as well. Just thought I would keep you posted.

Coach Kev

Minds at Mines

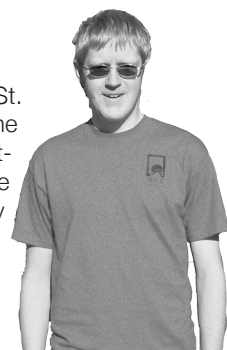
Giving thanks

Roby Brost
Staff Writer

A bad exam. A bad hair day. Trouble at home. Trouble paying rent. Significant other trouble. Not having a significant other. Getting sick. Being miserably ill and doing miserably on an exam. Sometimes, the continual grind of everyday life makes it hard to remember all the things that we are thankful for. It is hard to reflect on all the beautiful things that happen in the world when it seems as if the only news is bad news. The little things in life that go wrong often seem so overwhelming that taking a moment to pause and consider simple, good things seems impossible. In the midst of Thanksgiving break, students are taking the time to reflect on the objects of their thankfulness. Take a moment yourself. What are you thankful for this season?

"I am thankful for the opportunity to go to St. George's for the football team. I am thankful for the people here on campus that are far more interesting than at other colleges, and I am thankful for the friends I have made here. I am sure that I'll have many more things to add to the list later..."

Breian Wells



"I am thankful that I have all of my family with me, and that we have the opportunity to hang out together during Thanksgiving."

Justin Tappan

"I am thankful for snow and for friends to play in it with."

Andrea Ham



"I am thankful for the days we have off so that I have a chance to catch up on some sleep. That will be so nice."

Rustin Adler

"I am thankful that I will be able to spend time with my family and to spend some time with my amazing girlfriend, Tandra."

Nathan Shultz



"I am thankful for every day that I'm given to do something new and exciting."

Joshua Harrell

ALL PHOTOS ROBY BROST / OREDIGGER

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The Oredigger is a designated public forum. Editors have the authority to make all content decisions without censorship or advance approval and may edit submitted pieces for length so long as the original meaning of the piece is unchanged. Opinions contained within the Opinion Section do not necessarily reflect those of Colorado School of Mines or The Oredigger. The Oredigger does not accept submissions without identification and will consider all requests for anonymity in publication on a case-by-case basis. Submissions less than 300 words will receive preference.

Retooled Broncos attempt to save season

Matthew Pusard
Content Manager

The Denver Broncos are fighting rampant injuries, frequent turnovers, and an adversity to tackling to put themselves in prime position to make the playoffs.

2008 started out promising, with four wins in the first five games of the season. But, the team lost its next three games by a combined score of 41-91, mainly as a result of 11 combined turnovers. Turnovers have been the telltale statistic of the Broncos season. In their first six wins, the team turned over the ball 5 times while their first four losses had 15 combined turnovers. The Broncos and the Cowboys are the only two teams in the NFL with winning records and negative turnover differentials.

The Broncos are working on fixing their turnover crisis. Brandon Marshall has often been compared to trouble-making wide receivers like Terrell Owens and Randy Moss, but his attitude is diverging from his wide receiver peers. After his game-winning touchdown catch against Cleveland, Marshall downplayed the individual accomplishment and he owned up to a couple passes he dropped and an interception that

was his fault. "I screwed Jay [Cutler] a little bit," Marshall admitted to the NFL Network crew interviewing him. "Being accountable for my actions and showing [the rookies] that they can do the right things, it's just keeping me going," he continued.

Turnovers are not the only thing plaguing the Broncos though. The Broncos were a wreck, injury-wise.

Starting players are dropping like flies. Running backs Andre Hall, Michael Pittman, and Ryan Torain are all out for the season while starting running back Selvin Young has been out most of the season. The team's starting linebackers, DJ Williams, Nate Webster, and Boss Bailey, are also all out with injuries as is perennial Pro Bowl cornerback Champ Bailey. The team even suffered a spate of wide receiver injuries, losing Eddie Royal, Brandon Stokely, and tight end Tony Scheffler for a few games before the bye week.

To overcome the glut of injuries, the Broncos relied heavily on rookies. Royal and Ryan Clady have been the shining stars of the Broncos' 2008 draft class, earning some looks for Rookie of the Year, but Peyton Hillis, Spencer Larsen, and Wesley Woodyard are proving to be solid replacement players.

Hillis made the conversion from fullback to halfback when the team ran out of halfbacks and scored two touchdowns in his first start at HB against Atlanta. Larsen, meanwhile, was a rare three-way player against the Falcons, starting at fullback, linebacker, and on special teams. Woodyard is undersized for a linebacker, but he and Larsen held the NFL's third leading rusher, Michael Turner, to 3.2 yards per carry against Atlanta. That number is atypical for the Broncos' porous defense this season.

The rookie influx may have also saved the Broncos' defense. Nearly all of their playmakers are hobbled, but even since the bye week, the Broncos have allowed only 3.75 yards per carry, down from nearly 4.88 yards per carry that the squad has averaged all season.

One leading factor in this change is Shanahan's new policy on pads in practice. Ever since he took control of the Broncos in 1995, Shanahan's practices have never been in full pads, which allows for much more contact. But when the team showed a lack of toughness in their 41-7 loss to New England in week 7, Shanahan saw the need to go back to the basics. Shanahan saw how early deficits were losing games for the Broncos and since the change in practice, the Broncos have been more physical on the

defensive side of the ball.

The Broncos are also through experimenting with the 3-4 defense, which has only three defensive linemen and four linebackers.

Part of this was necessitated by a dearth of remaining linebackers, but the fact is that the Broncos were not getting the job done under that scheme when everyone was healthy. The passing defense is still suspect, but the run defense

will be stronger in the future.

All these adjustments have given the Broncos the division lead going into the home stretch of the season. While it helps to play in one of the worst divisions in recent history, Kansas City will be gunning to play the role of spoiler for the orange and blue. The Broncos are going to want to keep a 2 game margin between themselves and the San Diego Chargers going into week 17, when the two teams play again. If that is the case, nothing will be able to keep the Broncos out of the 2008 playoffs.

While it helps to play in one of the worst divisions in recent history, Kansas City will be gunning to play the role of spoiler for the orange and blue.

Something to prove

Keegan Hammond
Staff Writer

Your Oredigger football team will travel over 9 hours and 600 miles to attend the Dixie Rotary Bowl in St. George, Utah on December 6, 2008. The boys have earned a prestigious spot playing Western Washington University Vikings in the 23rd Annual Dixie Bowl. Teams earn an invitation by being one of the top schools from the Rocky Mountain Athletic Conference (RMAC) and the Great Northwest Athletic Conference (GNAC) that did not qualify for the NCAA Division II playoffs.

Head Coach Bob Stitt led his team to the same venue last year against the Western Oregon Wolves. Last year, the Orediggers fell behind in the first half, 19-0, and were unable to erase the deficit, losing 26-12. The game was not without its upsides for the Orediggers, though. They intercepted opposing quarterback Mark Thorson 4

times and quarterback David Pesek went into the bowl's record book with 26 completions and the team garnered a record 25 first downs. Unfortunately, it was not enough to overcome nine sacks and two late first half touchdowns by the Wolves.

Stitt said that this year, he and his team are going in with a different mental approach than last year. "Last year, we were fortunate to get invited; we didn't have a winning approach. This season we have something to prove and we need to win."

When asked about how Stitt believes his team compares to Western Washington, he said that he thinks, "We're very evenly matched. They are a very strong offensive team and can score a lot of points."

An all-business approach is what Stitt believes will help his team get the win. "We kept the same kind of practice plan. The boys understand that it is not all fun and games until we win, then we can celebrate. The

bowl setting is very laid back with banquets and sightseeing, but we want to be there for business."

With an overall record of 8-3, the Orediggers are obviously hoping for a win in Utah. If the team can achieve this, they will hold the second place spot for the most wins in the school's history. The first spot also came under Stitt in 2004 when the team won 12 games. Coach Stitt says that, "Getting nine wins really will separate us from the rest of the country."

Statistically, while the Orediggers and Vikings compare very closely offensively, the Vikings have allowed about 14 points per game more than the Orediggers.

Go out there and prove that Mines is the best. For those interested in watching the game from their homes, the game will be broadcast live on the Altitude 2 network and online at <http://www.justin.tv/vikingsradio>, courtesy of KBAI 930 AM out of Bellingham, Washington.



BREE WALTMAN / OREDIGGER

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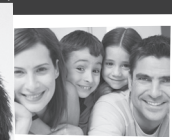
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HAXR 233

Janeen Neri
Mrs. Roboto

Though it was not listed in the course catalog this semester, CSM's first ever course on hacking filled up quickly last week. Taught by Dr. Billy Tanner, a 16-year-old programming prodigy, HAXR 233 is to debut this spring. The class "has only one prerequisite," said Tanner, in a slightly squeaky voice, "If you can find its number and register for it, that's good enough for me."

To make the task more complicated, Trailhead would not recognize the correct course number unless the student compromised the system and changes the code. "Yeah, I know that probably violates the [AC&N campus network] contract," said Tanner, "But where's the fun if there isn't a little risk? Besides, they aren't hurting anything."

Despite the challenge involved in registering for the class, it

reached its capacity of 25 students by Wednesday of last week. By Thursday, the capacity was increased to 40, though, as Tanner said, "I haven't touched it." The mysteriously expanded class filled up again later that day.

For a class that is not yet a requirement of any major, HAXR 233 has garnered plenty of interest from the student body. "I can't believe they're finally offering this class!" said Gwenllyn Nyrd, a junior in the Math and Computer Science program, "You have no idea how long we've petitioned and/or threatened total network failure for this one!"

Lynn Kepadell was more succinct. "YES!" was all the MACS senior could say. A group of students has already begun an unofficial waitlist for next fall, which is hidden somewhere on a private server and already contains 42 names.

The class is to be held from 11 to 11:50 pm on Monday, Wednesday, and Friday in the bunker underneath the CTLM. It will cover both the philosophy and practice of hacking. "Other students are welcome to sit in," said Tanner, "They can use our wireless network if they want - just log onto FreshVictimsNet anywhere in the room. It's generally very fast at the beginning of the evening. Plus, we have M&Ms."



JANEEN NERI / OREDIGGER

Facilities management department reveals master plan

Ben Makuh
Civil Specialist

In a press release last Friday, the CSM department of facilities management revealed their new master plan, which is intended to both attract more potential freshman and rearrange the budget to be more effective.

The underlying premise of the plan is based on the nearly-universal habit of every nerdy individual to stare at their feet when walking to a specified location. "It never dawned on us before, but this seemingly trivial habit can play a huge role in how we approach our budget planning," said Michael Ray, head of facilities management, when we asked for an interview.

"Since most nerds don't even realize that there is an 'up,' or even anything above the soles of their shoes, then obviously the ground is what needs the most care and attention," said Anna Welscott, who is an accounting technician. "In the past, we've generally approached our sidewalks by inlaying bricks to make them look fancy. In the Master Plan, we lay out our new initiative of phasing in new sidewalks made of Golden Cement™."

Golden Cement™ is a simple yet ingenious new development in the cement industry wherein a small amount of actual gold is superheated and then added into the cement mixture to give the cement a golden luster

when it dries. "The general idea in the Master Plan is that we don't want to look *just* fancy. In fact, we don't even want to look *just* classy. We want to look straight up blingin', which we think will really appeal to prospective (as well as current) students. Eventually we want to even phase Golden Linoleum™ into the buildings, as well," said Ray.

The rest of the document continues on the same premise, and it states most nerds will never even see the walls of the buildings they walk past every day so, a huge cut will be made in the budget regarding actually making those walls look good. "Let's be honest," said Welscott, "If the walls of Berthoud Hall are never actually seen, why on earth would we spend money on maintaining those fancy carved granite thingies if we can just replace them with pieces of cardboard? Why do we need

fancy stained glass in Arthur Lakes if we can sell them and buy golden sidewalks?"

During the interview, Ray outlined how replacing high-quality building materials around campus with trash (he used the word "recyclables") would not only pay the extra cost of the Golden Cement™, but would actually provide a significant, yet temporary, surplus in a time of nationwide economic recession. "Imagine the possibilities! We could use some of that extra cash to invest in a bunch of pizzas from Dominoes, and we could probably even throw in some drinks too," said Ray.

Over the next nine years, facilities management hopes to help increase the number of incoming freshmen by at least 95%, as nerdy high schoolers flock to "that one school where the sidewalks are made of 5% gold!"



BEN MAKUH / OREDIGGER

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- 5) The Best is Yet to Come - Frank Sinatra
- 4) Welcome to the Jungle - Guns N' Roses
- 3) U Can't Touch This - MC Hammer
- 2) Hey Ya - Cam'ron
- 1) Celebrate Good Times - Kool & The Gang
-Mike Stone

Mines cancels Christmas

Benjamin M. Weilert
Ghost of students past

Students at CSM have been used to not getting holidays off. For years, holidays such as Labor Day and Martin Luther King Jr. Day are regarded as normal school days, and thus not cancelled. However, the brief respite between semesters has always been a much needed break, until now.

Enforcing a long dormant "No Holidays" policy, Dean of Students, Ebenezer Grinch, announced that the spring semester shall begin the day after fall graduation. Nestled deep within the Human Rights waiver all students are required to sign upon entering the school, the "No Holidays" policy gives Mines the power to revoke any privileges gained by Holidays, religious or bank.

"I had suspected that Mines didn't have a soul, and this announcement proved it to me. They don't have a heart, or if they do, it's three sizes too small," remarked student body president, Chris Muss. Mr. Grinch's rebuttal was logical and cold, "We'd been giving these students far too much freedom over the years. This year we went too far with additions to fall and Thanksgiving breaks. In order to compensate, we'll have to cancel Christmas."

The move to forego the Christmas break is in part due to Golden's decision to ban holiday decorations on public property. CSM felt that it was a logical next step to just go ahead and skip the whole holiday season. Of course, the Mines Administration not recognizing Christmas has happened before. In fact, it was said that from 1973 to 1982, Mines ran on a year-round, continuous schedule. During that time span, students could get a degree in two and a half years. This strategy is now employed by DeVry, but with much easier coursework.

Perhaps the hardest hit by the policy change is the student chapter of Dyslexic Satanists. "We never get Halloween off, so when Christmas rolls around, we can finally celebrate.

After all, it's the one time each year when Satan comes down from his workshop to distribute presents to the entire world," said club president, Lucy Ferr.

The most disturbing part about the decision is that some students wouldn't have noticed a difference. "The only reason that I know there's some kind of major holiday coming up is because the computer labs will kick me out," said albino student, Barry White. "If they never shut down the computers, I'd never leave."

Perhaps the hardest hit by the policy change is the student chapter of Dyslexic Satanists.

String of robberies in Ridgway

Mike Stone
B&E Resident Expert

In the small town of Ridgway, Colorado, there are only 227 residents, everyone knows each other's name, the coffee shop is the place to see friends, and the police station is also the post office. Over the past three years, the town has grown in fame to be the most "Christmas-festive" town in Colorado and some are apparently not happy about it. During the course of one night last week, a string of robberies took away every Christmas decoration in town. Every single home in town was robbed from top to bottom while its residents slept.

At first, residents couldn't believe it. "They took our who pudding, they took the roast beast. They emptied our ice box as quick as a flash. Why, they even took the last can of who hash! It's just awful!" cried resident Cindy Lou Reynolds. The robber, or robbers (as police are still uncertain how this event could have been coordinated), took much more than Reynolds would divulge. Taking tantinkers and blam-blinkers were just the beginning. They took drums, trees, stockings, and plums. They took hats, dolls, baseballs, and bats. The last thing they took was the log for their fire. On the walls they left only hooks and some wire. Finally, the one speck of food that they left in the house was a crumb that was too small for a mouse.

Police Chief Jeff Donovan released a statement on the robberies. "The initial estimated take for the robbers is at \$1.4 million and is still growing. If we ever find these people, we will punish them to the

full extent of the law, which in Ouray County, though outdated, is carving the Roast Beast for the whole town," said Chief Donovan. "One resident saw the assailant and a sketch was made up and released. I just wish these people would show their faces."

After all that tragedy, it is difficult to understand the actions of different people. A few student residents of the town joined hands in the town square and began to sing around

10 AM the day after the robberies to console each other. As time drifted on, more and more residents joined the group in the square and sang along. "Yahoo dores, yahoo dores, welcome Christmas, bring your cheer," they all chanted over and over in jubilant song.

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